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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/381,497

DATE: 06/09/2000
TIME: 14:07:35

Input Set : A:\Nih317-1.app
Output Set: N:\CRF3\06082000\I381497.raw

4 (1) GENERAL INFORMATION:
6 (i) APPLICANT: FitzGerald, David
7 Pastan, Ira
8 Mansfield, Elizabeth
9 Kreitman, Robert
11 (ii) TITLE OF INVENTION: Recombinant Antibodies and
12 Immunoconjugates Targeted to CD-22 Bearing Cells and
13 Tumors
15 (iii) NUMBER OF SEQUENCES: 15
17 (iv) CORRESPONDENCE ADDRESS:
18 (A) ADDRESSEE: Townsend and Townsend and Crew LLP
19 (B) STREET: Two Embarcadero Center, Eighth Floor
20 (C) CITY: San Francisco
21 (D) STATE: California
22 (E) COUNTRY: USA
23 (F) ZIP: 94111-3834
25 (v) COMPUTER READABLE FORM:
26 (A) MEDIUM TYPE: Floppy disk
27 (B) COMPUTER: IBM PC compatible
28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
C--> 31 (vi) CURRENT APPLICATION DATA:
C--> 32 (A) APPLICATION NUMBER: US/09/381,497
C--> 33 (B) FILING DATE: 17-Feb-2000
34 (C) CLASSIFICATION:
40 (vii) PRIOR APPLICATION DATA:
37 (A) APPLICATION NUMBER: WO PCT/US98/05453
38 (B) FILING DATE: 19-MAR-1998
41 (A) APPLICATION NUMBER: US 60/041,437
42 (B) FILING DATE: 20-MAR-1997
44 (viii) ATTORNEY/AGENT INFORMATION:
45 (A) NAME: Weber, Ellen Lauver
46 (B) REGISTRATION NUMBER: 32,762
47 (C) REFERENCE/DOCKET NUMBER: 015280-317100US
49 (ix) TELECOMMUNICATION INFORMATION:
50 (A) TELEPHONE: (415) 576-0200
51 (B) TELEFAX: (415) 576-0300
54 (2) INFORMATION FOR SEQ ID NO: 1:
56 (i) SEQUENCE CHARACTERISTICS:
57 (A) LENGTH: 369 base pairs
58 (B) TYPE: nucleic acid
59 (C) STRANDEDNESS: single
60 (D) TOPOLOGY: linear
W--> 62 (ii) MOLECULE TYPE: DNA
65 (ix) FEATURE:
66 (A) NAME/KEY: CDS
67 (B) LOCATION: 1..369

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68 (D) OTHER INFORMATION: /product= "RFB4 heavy chain"
 71 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
 73 GAA GTG CAG CTG GTG GAG TCT GGG GGA GGC TTA GTG AAG CCT GGA GGG 48
 74 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 75 1 5 10 15
 77 TCC CTG AAA CTC TCC TGT GCA GCC TCT GGA TTC GCT TTC AGT ATC TAT 96
 78 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ile Tyr
 79 20 25 30
 81 GAC ATG TCT TGG GTT CGC CAG ACT CCG GAG AAG AGG CTG GAG TGG GTC 144
 82 Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
 83 35 40 45
 85 GCA TAC ATT AGT AGT GGT GGT GGT ACC ACC TAC TAT CCA GAC ACT GTG 192
 86 Ala Tyr Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Pro Asp Thr Val
 87 50 55 60
 89 AAG GGC CGA TTC ACC ATC TCC AGA GAC AAT GCC AAG AAC ACC CTG TAC 240
 90 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 91 65 70 75 80
 93 CTG CAA ATG AGC AGT CTG AAG TCT GAG GAC ACA GCC ATG TAT TAC TGT 288
 94 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
 95 85 90 95
 97 GCA AGA CAT AGT GGC TAC GGT AGT AGC TAC GGG GTT TTG TTT GCT TAC 336
 98 Ala Arg His Ser Gly Tyr Gly Ser Ser Tyr Gly Val Leu Phe Ala Tyr
 99 100 105 110
 101 TGG GGC CAA GGG ACT CTG GTC ACT GTC TCT GCA 369
 102 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
 103 115 120
 106 (2) INFORMATION FOR SEQ ID NO: 2:
 108 (i) SEQUENCE CHARACTERISTICS:
 109 (A) LENGTH: 123 amino acids
 110 (B) TYPE: amino acid
 111 (D) TOPOLOGY: linear
 113 (ii) MOLECULE TYPE: protein
 115 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
 117 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
 118 1 5 10 15
 120 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ile Tyr
 121 20 25 30
 123 Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
 124 35 40 45
 126 Ala Tyr Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Pro Asp Thr Val
 127 50 55 60
 129 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 130 65 70 75 80
 132 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
 133 85 90 95
 135 Ala Arg His Ser Gly Tyr Gly Ser Ser Tyr Gly Val Leu Phe Ala Tyr
 136 100 105 110
 138 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
 139 115 120

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142 (2) INFORMATION FOR SEQ ID NO: 3:
 144 (i) SEQUENCE CHARACTERISTICS:
 145 (A) LENGTH: 321 base pairs
 146 (B) TYPE: nucleic acid
 147 (C) STRANDEDNESS: single
 148 (D) TOPOLOGY: linear
 W--> 150 (ii) MOLECULE TYPE: DNA
 153 (ix) FEATURE:
 154 (A) NAME/KEY: CDS
 155 (B) LOCATION: 1..321
 156 (D) OTHER INFORMATION: /product= "RFB4 light chain"
 159 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
 161 GAT ATC CAG ATG ACC CAG ACT ACA TCC TCC CTG TCT GCC TCT CTG GGA 48
 162 Asp Ile Gln Met Thr Gln Thr Ser Ser Leu Ser Ala Ser Leu Gly
 163 1 5 10 15
 165 GAC AGA GTC ACC ATT AGT TGC AGG GCA AGT CAG GAC ATT AGC AAT TAT 96
 166 Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
 167 20 25 30
 169 TTA AAC TGG TAT CAG CAG AAA CCA GAT GGA ACT GTT AAA CTC CTG ATC 144
 170 Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
 171 35 40 45
 173 TAC TAC ACA TCA ATA TTA CAC TCA GGA GTC CCA TCA AAG TTC AGT GGC 192
 174 Tyr Tyr Thr Ser Ile Leu His Ser Gly Val Pro Ser Lys Phe Ser Gly
 175 50 55 60
 177 AGT GGG TCT GGA ACA GAT TAT TCT CTC ACC ATT AGC AAC CTG GAG CAA 240
 178 Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
 179 65 70 75 80
 181 GAA GAT TTT GCC ACT TAC TTT TGC CAA CAG GGT AAT ACG CTT CCG TGG 288
 182 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
 183 85 90 95
 185 ACG TTC GGT GGA GGC ACC AAG CTG GAA ATC AAA 321
 186 Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys
 187 100 105
 190 (2) INFORMATION FOR SEQ ID NO: 4:
 192 (i) SEQUENCE CHARACTERISTICS:
 193 (A) LENGTH: 107 amino acids
 194 (B) TYPE: amino acid
 195 (D) TOPOLOGY: linear
 197 (ii) MOLECULE TYPE: protein
 199 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 201 Asp Ile Gln Met Thr Gln Thr Ser Ser Leu Ser Ala Ser Leu Gly
 202 1 5 10 15
 204 Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
 205 20 25 30
 207 Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
 208 35 40 45
 210 Tyr Tyr Thr Ser Ile Leu His Ser Gly Val Pro Ser Lys Phe Ser Gly
 211 50 55 60
 213 Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln

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214 65          70          75          80
216 Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
217           85          90          95
219 Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys
220           100         105
223 (2) INFORMATION FOR SEQ ID NO: 5:
225   (i) SEQUENCE CHARACTERISTICS:
226     (A) LENGTH: 4 amino acids
227     (B) TYPE: amino acid
228     (C) STRANDEDNESS:
229     (D) TOPOLOGY: linear
231   (ii) MOLECULE TYPE: peptide
234   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
236   Gly Gly Gly Ser
237   1
240 (2) INFORMATION FOR SEQ ID NO: 6:
242   (i) SEQUENCE CHARACTERISTICS:
243     (A) LENGTH: 33 base pairs
244     (B) TYPE: nucleic acid
245     (C) STRANDEDNESS: single
246     (D) TOPOLOGY: linear
W--> 248   (ii) MOLECULE TYPE: DNA
251   (ix) FEATURE:
252     (A) NAME/KEY: -
253     (B) LOCATION: 1..33
254     (D) OTHER INFORMATION: /note= "RFB4 VH5 heavy chain primer"
257   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
259 GGACCTCATATA TGGAAAGTGCA GCTGGTGGAG TCT          33
262 (2) INFORMATION FOR SEQ ID NO: 7:
264   (i) SEQUENCE CHARACTERISTICS:
265     (A) LENGTH: 24 base pairs
266     (B) TYPE: nucleic acid
267     (C) STRANDEDNESS: single
268     (D) TOPOLOGY: linear
W--> 270   (ii) MOLECULE TYPE: DNA
273   (ix) FEATURE:
274     (A) NAME/KEY: -
275     (B) LOCATION: 1..24
276     (D) OTHER INFORMATION: /note= "gamma-CH1 heavy chain primer"
279   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
281 AGCAGATCCA GGGGCCACTG GATA          24
284 (2) INFORMATION FOR SEQ ID NO: 8:
286   (i) SEQUENCE CHARACTERISTICS:
287     (A) LENGTH: 54 base pairs
288     (B) TYPE: nucleic acid
289     (C) STRANDEDNESS: single
290     (D) TOPOLOGY: linear
W--> 292   (ii) MOLECULE TYPE: DNA
295   (ix) FEATURE:

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296      (A) NAME/KEY: -
297      (B) LOCATION: 1..54
298      (D) OTHER INFORMATION: /note= "RFB4 VH3 heavy chain primer"
301      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:          54
303 AGATCCGCCA CCACCGGATC CGCCTCCGCC TGCAGAGACA GTGACCAGAG TCCC
306 (2) INFORMATION FOR SEQ ID NO: 9:                  54
308      (i) SEQUENCE CHARACTERISTICS:
309          (A) LENGTH: 27 base pairs
310          (B) TYPE: nucleic acid
311          (C) STRANDEDNESS: single
312          (D) TOPOLOGY: linear
W--> 314      (ii) MOLECULE TYPE: DNA
317      (ix) FEATURE:
318          (A) NAME/KEY: -
319          (B) LOCATION: 1..27
320          (D) OTHER INFORMATION: /note= "RFB4 VH3 dsFv heavy chain
321 primer"
325          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:          27
327 CCGGAAGCTT TTGCAGAGAC AGTGACC
330 (2) INFORMATION FOR SEQ ID NO: 10:                  27
332      (i) SEQUENCE CHARACTERISTICS:
333          (A) LENGTH: 28 base pairs
334          (B) TYPE: nucleic acid
335          (C) STRANDEDNESS: single
336          (D) TOPOLOGY: linear
W--> 338      (ii) MOLECULE TYPE: DNA
341      (ix) FEATURE:
342          (A) NAME/KEY: -
343          (B) LOCATION: 1..28
344          (D) OTHER INFORMATION: /note= "RFB4 VH dsFv(cys) heavy chain
345 primer"
348          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:          28
350 GACCACTTC AGGCACTTCT CCGGAGTC
353 (2) INFORMATION FOR SEQ ID NO: 11:                  28
355      (i) SEQUENCE CHARACTERISTICS:
356          (A) LENGTH: 48 base pairs
357          (B) TYPE: nucleic acid
358          (C) STRANDEDNESS: single
359          (D) TOPOLOGY: linear
W--> 361      (ii) MOLECULE TYPE: DNA
364      (ix) FEATURE:
365          (A) NAME/KEY: -
366          (B) LOCATION: 1..48
367          (D) OTHER INFORMATION: /note= "RFB4 VL5 light chain primer"
370          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:          48
372 GGTGGCGGAT CTGGAGGTGG CGGAAGCGAT ATCCAGATGA CACAGACT
375 (2) INFORMATION FOR SEQ ID NO: 12:                  48
377      (i) SEQUENCE CHARACTERISTICS:
378          (A) LENGTH: 24 base pairs

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/381,497

DATE: 06/09/2000

TIME: 14:07:36

Input Set : A:\Nih317-1.app

Output Set: N:\CRF3\06082000\I381497.raw

L:62 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=1, Value=[DNA]
L:150 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3, Value=[DNA]
L:248 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6, Value=[DNA]
L:270 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=7, Value=[DNA]
L:292 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=8, Value=[DNA]
L:314 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=9, Value=[DNA]
L:338 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=10, Value=[DNA]
L:361 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=11, Value=[DNA]
L:383 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=12, Value=[DNA]
L:405 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=13, Value=[DNA]
L:427 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=14, Value=[DNA]
L:450 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=15, Value=[DNA]